Audit of Forest Planning and Practices
Forest Licence A20002
West Fraser Mills Ltd.

FPB/ARC/63

June 2004

105-02984/

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Report from the Board

A. Report from the Board

This is the Board's report on a compliance audit of forest licence A20002, held by West Fraser Mills Ltd. (West Fraser). The operating area for the volume-based forest licence A20002 is within the 100 Mile House Forest District. West Fraser's operations during the audit period were primarily located in the south-eastern area of the district, north of the town of Clinton and south of 100 Mile House (see map on Page A-3).

The Report from the Auditor (Part C) provides details on the certification status of the licence, ministry advice to West Fraser relating to harvesting timber damaged by mountain pine beetles, the status of land use plans in the area, the scope of the audit, and the audit findings. The Report from the Auditor is based on the audit procedures described in Part B.[1]

The audit examined West Fraser's operational planning; timber harvesting; road construction, maintenance and deactivation; silviculture; and fire protection practices for the period from June 1, 2002, to June 9, 2003.

The Report from the Auditor states that West Fraser's forest planning and practices under forest licence A20002 complied with the Code requirements in all significant respects during this period.

As detailed in the audit report, the audit identified a scope limitation that prevented the audit from assessing two cutblocks for compliance with the Code requirement that cutblocks not exceed 60 hectares. Although the Code provides for cutblocks to exceed 60 hectares in situations where harvesting is necessary to recover timber damaged by insects, the level of beetle-attacked timber in these blocks could not be substantiated by the audit due to a fire at West Fraser's woodlands office. Consequently, the audit was not able to assess whether these two cutblocks were in compliance with respect to this requirement.

The Board affirms the auditor's opinion statement and the audit scope limitation. Except for the scope limitation discussed previously, the audit confirmed West Fraser's forest planning and practices complied with Code requirements in all significant respects. The Board congratulates West Fraser on these positive audit results.

As mentioned above, the destruction of records by a fire prevented certain audit assessments. The auditors informed the Board that West Fraser's rationale for the size of the cutblocks was plausible. West Fraser stated that a large beetle infestation justified the larger cutblocks. Representatives from the local Ministry of Forests office also reported that some portions of

[1] Part B of this document provides background information on the Board's audit program and the process followed by the Board in preparing its report.

West Fraser's operating area had been heavily attacked by beetles, and that West Fraser has worked co-operatively with the ministry in addressing the beetle problem.

Forest health practices

During the period subject to audit, the beetle population in West Fraser's operating area was not epidemic and the district manager's guidance and expectations focused on expeditiously removing small infestations. The audit noted that West Fraser's forest health practices could be improved by more closely following the district guidance and by utilizing the provisions of the *Bark Beetle Regulation.*

The Board recognizes the shortcomings innate to current beetle control measures. The Board's recent work in more heavily infested areas of the province suggests it is possible to slow the rate of beetle spread through aggressively targeting small infestations. In the absence of very cold early winter weather, however, the success of such measures has generally been limited.

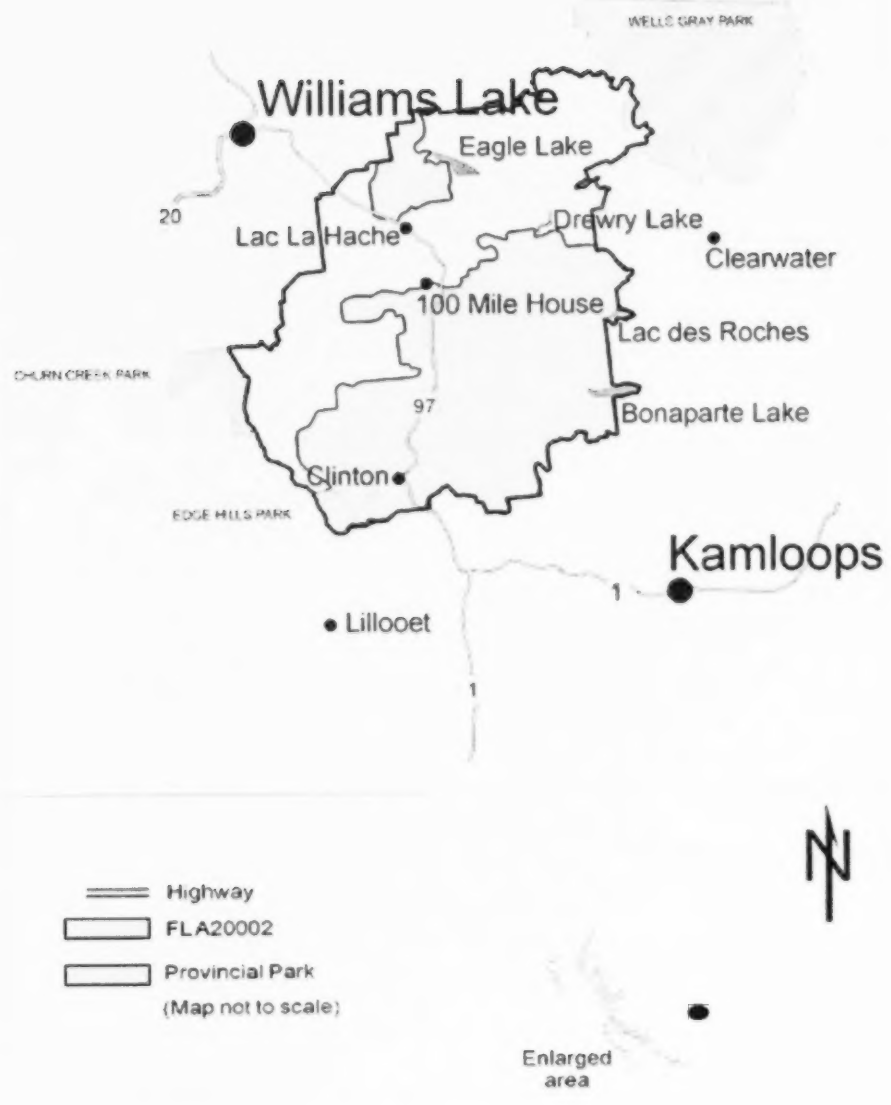
Based on discussions with representatives from the Ministry of Forests, it is the Board's understanding that the beetle attack in the 100 Mile House Forest District has reached uncontrollable levels this year. The Board recognizes that any intervention measures by West Fraser may now be of limited effectiveness in controlling the spread of beetles.

The Board is encouraged that the audit found that the bulk of West Fraser's harvesting was aimed at the removal of beetle-infested timber. The Board encourages West Fraser to continue to aggressively target beetle-infestations for removal utilizing all of the 'tools' at its disposal, and also to minimize the harvesting of incidental, non-infested timber. This is particularly important to maximize capacity for the removal of beetle-infestations and for biodiversity in situations where it is necessary that cutblocks exceed the legislated maximum size.

Bruce Fraser, PhD
Chair, Forest Practices Board

May 27, 2004

Audit of Chasm Sawmills
a division of West Fraser Mills Ltd.
FL A20002



Forest Practices Board Compliance Audit Process

B. Forest Practices Board Compliance Audit Process

Background

The Forest Practices Board conducts audits of government and agreement-holders for compliance with the *Forest Practices Code of British Columbia Act* and regulations (the Code). The Board has the authority to conduct these periodic independent audits under section 176 of the *Forest Practices Code of British Columbia Act*. Compliance audits examine forest planning and practices to determine whether or not they meet Code requirements.

The Board can undertake "limited scope" or "full scope" compliance audits. A limited scope audit examines selected forest practices (e.g., road construction, maintenance and deactivation; timber harvesting; or silviculture) and the related operational planning activities. A full scope audit examines all operational planning activities and forest practices.

The Board determines how many audits it will conduct in a year, and what type of audits (limited or full scope), based on budget and other considerations. The Board audits agreement-holders who have forest licences or other tenures under the *Forest Act* or the *Range Act*. The Board also audits government's BC Timbers Sales program (BCTS), which is administered by Ministry of Forests Timber Sales' offices. Selection of agreement-holders and Timber Sales programs for audit is done randomly, using a computer program, to ensure a fair, unbiased selection of auditees.

Increasingly, licensees are obtaining certification of their operational planning activities and forest practices under one or more certification programs.[1] Certification by these programs is generally intended to assure customers and markets that forests are being managed sustainably and in an environmentally sound manner, while Board audits are intended to assure the public landowners that forest practices are being conducted in accordance with the Forest Practices Code. Recognizing that forestry certification involves some processes and objectives similar to those of the Board, the Board's approach, where feasible, is to utilize work undertaken by companies under the various certification programs (certification generally includes an option for companies to voluntarily undergo third party verification audits) to reduce the level of audit work associated with a Board compliance audit, while maintaining its high audit standards. Where warranted, the Board expects that its auditors can reduce the level of field testing on those licensees that are certified, thereby minimizing duplication of audit work performed while still serving the public interest.

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[1] A number of international organizations have established unique programs, including standards of practice, to certify and monitor forest industry performance in the area of forest sustainability and environmental protection. These organizations include the Canadian Standards Association (CSA), the Forest Stewardship Council (FSC), the International Organization for Standardization (ISO 14001), and the Sustainable Forestry Initiative (SFI).

Audit Standards

Audits by the Forest Practices Board are conducted in accordance with the auditing standards developed by the Board. These standards are consistent with generally accepted auditing standards.

The audits determine compliance with the Code, based on criteria derived from the *Forest Practices Code of British Columbia Act* and its related regulations. Audit criteria are established to evaluate or measure each practice regulated by the Code. The criteria reflect judgments about the level of performance that constitutes compliance with each requirement

The standards and procedures for compliance audits are described in the Board's *Compliance Audit Reference Manual.*

Audit Process

Conducting the Audit

Once the Board selects an audit and decides on its scope (limited scope or full scope) and/or area, the audit period and the staff and resources required to conduct the audit are determined. Board staff meet with the parties being audited to discuss logistics before commencing the work.

All the activities carried out during the period subject to audit are identified; for example, harvesting or replanting sites and constructing or deactivating road sections. The items that make up each forest activity are referred to as a "population." For example, all sites harvested form the "timber harvesting population." All road sections constructed form the "road construction population." The populations are then sub-divided based on factors such as characteristics of the sites and potential severity of the consequences of non-compliance on the sites.

For each population, the auditors choose the most efficient means of obtaining information to conclude whether there is compliance with the Code. For efficiency, auditors usually rely upon sampling to obtain audit evidence, rather than inspecting all activities.

Individual sites and forest practices within each population have different characteristics, such as the type of terrain or type of yarding. Each population is divided into distinct subpopulations on the basis of common characteristics (e.g., steep ground vs. flat ground). A separate sample is selected for each population (e.g., the cutblocks selected for auditing timber harvesting). Within each population, more audit effort (i.e., more audit sampling) is allocated to the sub-population where the risk of non-compliance is greater.

Audit work in the field includes assessments from the air using helicopters and ground procedures, such as measuring specific features like road or riparian reserve zone width. The audit teams generally spend one to two weeks in the field.

For audits of certified companies, in determining the level of field testing necessary, Board auditors examine and test, a certified company's systems and procedures related to achieving Code compliance, as well as the specific audit tests carried out by certification auditors. The auditors gain an understanding of the requirements of the applicable certification program, and any verification audit(s) undergone by the company, in relation to the requirements of the Code. This entails visiting both the company's and the external verification auditor's offices to review and test certification systems and the certification audit. Field testing is then carried out, generally with smaller sample sizes than in audits of non-certified companies.

Thus, the Board's approach does not assume that all certification programs achieve the public interest, but focuses on an evaluation of the selected licensee's management controls to achieve Code compliance, including an examination of the audit work conducted by the independent certification auditors in determining whether the licensee's procedures for achieving Code compliance conformed with the required certification standards. This testing provides assurance that the certification audit work meets the Board's audit standards, and that a company's certification systems adequately address Code requirements.

If, however, this testing determines that the rigour of the certification audit process is not sufficient, or that certification systems do not adequately address Code requirements, then the licensee is audited by the Board in the same manner as licensees who are not certified.

Evaluating the Results

The Board recognizes that compliance with the many requirements of the Code is more a matter of degree than absolute adherence. Determining compliance, and assessing the significance of non-compliance, requires the exercise of professional judgment within the direction provided by the Board

Auditors collect, analyze, interpret and document information to determine the audit results. The audit team, composed of professionals and technical experts, first determines whether forest practices comply with Code requirements. For those practices considered to not be in compliance, the audit team then evaluates the degree to which the practices are judged not in compliance. The significance of the non-compliance is determined based on a number of criteria, including the magnitude of the event, the frequency of its occurrence and the severity of the consequences.

As part of the assessment process, auditors categorize their findings into the following levels of compliance:

Compliance – where the auditor finds that practices meet Code requirements.

Not significant non-compliance – where the auditor, upon reaching a non-compliance conclusion, determines that a non-compliance event, or the accumulation and consequences of a number of non-compliance events, is not significant and is not considered worthy of reporting.

Significant non-compliance – where the auditor determines that the event or condition, or the accumulation and consequences of a number of non-compliance events or conditions, is or has the potential to be significant, and is considered worthy of reporting.

Significant breach – where the auditor finds that significant harm has occurred, or is beginning to occur, to persons or the environment as a result of the non-compliance. A significant breach can also result from the cumulative effect of a number of non-compliance events or conditions.

Identification of a possible significant breach requires the auditor to conduct tests to confirm whether or not there has been a breach. If it is determined that a significant breach has occurred, the auditor is required by the *Forest Practices Board Regulation* to immediately advise the Board, the party being audited, and the Ministers of Forests, Energy and Mines, and Water, Land and Air Protection.

Reporting

Based on the above evaluation, the auditor then prepares the "Report from the Auditor" for submission to the Board. The party being audited is given a draft of the report before it is submitted to the Board so that the party is fully aware of the findings. The auditee is also kept fully informed of the audit findings throughout the process, and is given opportunities to provide additional relevant information and to ensure the auditor has complete and correct information.

Once the auditor submits the report, the Board reviews it and determines if the audit findings may adversely affect any party or person. If so, the party or person must be given an opportunity to make representations before the Board decides the matter and issues a final report to the public and government. The representations allow parties that may potentially be adversely affected to present their views to the Board.

At the discretion of the Board, representations may be written or oral. The Board will generally decide on written representations, unless the circumstances strongly support the need for an oral hearing.

The Board then reviews the report from the auditor and the representations from parties that may potentially be adversely affected before preparing its final report, which includes the Board's conclusions and, if appropriate, recommendations.

If the Board's conclusions or recommendations result in newly adversely affected parties or persons, additional offers of representations would be required.

Once the representations have been completed, the report is finalized and released: first to the auditee and then to the public and government.

Report from the Auditor

C. Report from the Auditor

1.0 Introduction

As part of the Forest Practices Board's 2003 compliance audit program, Forest Licence (FL) A20002 was selected for audit from the population of major forest licences within the Southern Interior Forest Region. The licence, held by the West Fraser Mills Ltd. (West Fraser), was selected randomly and not on the basis of location or level of performance.

FL A20002 is a volume-based licence within the 100 Mile House Timber Supply Area and lies within the 100 Mile House Forest District. Forest licences do not have specific geographic boundaries within which forest activities are restricted. Traditionally, and during the period of the audit, operations under FL A20002 were primarily in the south-eastern area of the district, north of the town of Clinton and south of 100 Mile House (see map on page A-3). The forests in this area include primarily lodgepole pine and interior Douglas-fir. The terrain varies from gentle in the west to steeper in the east.

FL A20002 has an allowable annual cut of 486,742 cubic metres. Approximately 510,000 cubic metres was harvested during the audit period, predominantly by ground-based methods. The silviculture system used most frequently was clearcut with reserves.

Certification Status

West Fraser's woodlands operations under FL A20002 are certified under the International Organization for Standardization (ISO) 14001[i]. When auditing certified companies, it is the Board's policy to place some reliance on the work of the licensee's external verification auditors, where possible, to reduce the extent of field testing required. This approach can reduce the cost of the audit, without compromising audit standards.

West Fraser, and its external verification auditors, granted the Board auditors permission to review the ISO audit working papers. However, after reviewing the ISO audit working papers, the Board auditors determined that the ISO audit examined different components of environmental management practices than a standard Board audit examines. In this case, the auditors determined that it would be more cost-effective to conduct a standard Board compliance audit and not place reliance on the external auditor's work.

Mountain Pine Beetles

For several years, mountain pine beetle populations have been increasing in West Fraser's operating area under FL A20002 and have been dictating West Fraser's harvesting activities. In 2001, the district manager of the 100 Mile House Forest District provided guidance on beetle control activities, which is applicable to West Fraser's forest planning and practices under FL A20002. Compliance with this guidance is not a legal requirement.

In 2001, government implemented the *Bark Beetle Regulation* (BBR). The regulation applies to certain forest activities within the government-designated emergency bark beetle management area, which includes the 100 Mile House Forest District. The intent of the BBR is to enable expedited removal of timber infested by beetles to prevent their spread. Under the BBR, the district manager may exempt licensees from most operational planning requirements, such as providing maps and schedules in a forest development plan and the preparation of site plans.

Land Use Plans

In July 1995, the Ministry of Forests and the Ministry of Environment, Lands and Parks (now the Ministry of Water, Land and Air Protection) completed the Cariboo-Chilcotin Land Use Plan (CCLUP), which was in effect during the period of the audit. The CCLUP provides high-level strategic direction to licensees' forest development planning and applied to the area under West Fraser's forest development plan[ii].

More detailed direction, including measurable targets, was supposed to be developed through the implementation of sub-regional plans for each forest district within the CCLUP boundaries. The 100 Mile House sub-regional plan (subsequently re-named a sustainable resource management plan) has not been finalized. The draft plan delineates landscape units and includes proposed biodiversity emphasis options and old growth management areas. Compliance with the draft plan is not a legal requirement.

2.0 Audit Scope

The audit examined West Fraser's planning and field activities in the areas of operational planning (including forest development plans, silviculture prescriptions[iii], and site-plans[iv]); timber harvesting; road construction, maintenance and deactivation; silviculture; and fire protection. These activities were assessed for compliance with the *Forest Practices Code of British Columbia Act* and related regulations (the Code).

All activities, plans and obligations for the period June 1, 2002 to June 9, 2003, were included in the scope of the audit.

The activities and obligations carried out by West Fraser during the audit period, and therefore subject to the audit, were:

- harvesting of 79 cutblocks
- construction of 22.3 kilometres of road
- maintenance of approximately 1,087 kilometres of road, involving activities such as road surfacing and cleaning culverts and ditches
- construction of 8 bridges and maintenance of 45 bridges
- deactivation of approximately 29.7 kilometres of roads

- site preparation for tree planting on 59 cutblocks and tree planting on 68 cutblocks
- manual brushing on 11 cutblocks and spacing on 15 cutblocks
- regeneration obligations on 51 cutblocks and free-growing obligations on 130 cutblocks
- fire-protection planning and infrastructure
- fire tools and equipment during active operations

West Fraser's activities during the audit period were approved under the 1999–2004 forest development plan (FDP) and amendments, and the 2003–2007 FDP and amendments.

Section 3 describes the audit of these activities and the results. The Board's audit reference manual, *Compliance Audit Reference Manual, Version 6.0, May 2003*, sets out the standards and procedures that were used to carry out this audit.

2.1 Audit Scope Limitation

In July 2002, West Fraser's woodlands office in Chasm, BC was substantially damaged by fire. A number of records relating to West Fraser's forest activities subject to this audit were destroyed by the fire. The loss of these records prevented the audit from assessing compliance, for cutblocks 423-08 and 420-01, with the Code requirement that cutblocks not exceed 60 hectares.

3.0 Audit Findings

Planning and Practices Examined

The audit work on selected roads and cutblocks included ground-based procedures and assessments from the air using a helicopter. The audit examined:

- harvesting of 30 cutblocks, and related operational plans
- construction of 20.4 kilometres of new road
- maintenance of approximately 179 kilometres of road
- deactivation of approximately 6.5 kilometres of road
- construction of 5 bridges and maintenance of 14 bridges
- site preparation for tree planting on 4 cutblocks and tree planting on 4 cutblocks
- manual brushing on 1 cutblock, and spacing on 4 cutblocks
- regeneration obligations on 10 cutblocks, and free-growing obligations on 22 cutblocks
- fire-protection planning and infrastructure

The audit examined West Fraser's 2003–2007 forest development plan.

The audit did not examine West Fraser's fire tools and equipment during active operations because there were no active harvesting or road activities at the time of the audit.

Findings

The audit found that, except for the scope limitation described below, West Fraser's forest planning and practices complied, in all significant respects, with the Code requirements for operational planning; timber harvesting; road construction, maintenance and deactivation; silviculture; and fire-protection planning and infrastructure.

As described in section 2.1, the audit identified a scope limitation that prevented the audit from assessing compliance for cutblocks 423-08 (108 hectares) and 420-01 (104 hectares) with the Code requirement that cutblocks not exceed 60 hectares. The Code provides for cutblocks to exceed 60 hectares in situations where harvesting is necessary to recover timber damaged by insects. West Fraser indicated that appropriate field data was collected while planning the cutblocks, which demonstrated epidemic levels of mountain pine beetle in the cutblocks. However, these planning documents were destroyed by the fire at West Fraser's office. Consequently, the audit is not able to substantiate the level of beetle-attacked timber in the cutblocks and, therefore, not able to assess whether the cutblocks are in compliance with the Code requirement that cutblocks not exceed 60 hectares.

Forest Health Practices

In 2001, the district manager of the 100 Mile House Forest District provided guidance specific to beetle control in the district (*Minor Salvage / Bark Beetle Control – Licensees Expectations and Guidelines, November 16, 2001*). The guidance recognized that as the beetle populations increase, so does the percentage of beetle-attacked timber relative to each licensee's allowable annual cut.

Licensees were encouraged to minimize the percentage of incidental non-infested volume harvested. Recommended control options based on the level of attack present were also provided. The percentage of attacked stems was to be determined by ground probes for each ten-hectare unit, so that each unit, or group of units, could be prescribed the appropriate control treatment.

During the audit period, the bulk of West Fraser's harvesting activities was aimed at the removal of mountain pine beetle-infested timber. However, the areas beetle-probed by West Fraser were not stratified into ten-hectare units and the percentage of attacked stems in the areas probed was not quantified. West Fraser indicated that the beetle probes were of limited use in determining appropriate control treatments. As a result, the percentage of incidental non-infested timber harvested by West Fraser may not have been minimized. This practice requires improvement.

The optimal control strategy to minimize the spread of beetle populations is to aggressively target pine trees containing live beetles for removal, by harvesting or disposing of the trees. In 2001, government implemented the *Bark Beetle Regulation* (BBR). The intent of the BBR is to enable expedited removal of timber infested by beetles to prevent their spread. Under the BBR, the district manager may exempt licensees from most operational planning requirements, such as providing maps and schedules in an FDP and the preparation of site plans. West Fraser has opted not to utilize the BBR because the regulation restricts cutblock size to15 hectares. West Fraser's approach to beetle control may not minimize the spread of beetles in West Fraser's operating area.

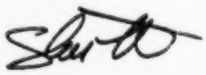
4.0 Audit Opinion

In my opinion, except as described below, the operational planning; timber harvesting; road construction, maintenance and deactivation; silviculture; and fire-protection planning activities carried out by West Fraser Mills Ltd. under Forest Licence A20002, from June 1, 2002, to June 9, 2003, were in compliance, in all significant respects with the requirements of the Code as of June 2003. No opinion is provided on fire-protection activities in the field because operations were inactive during the audit.

As described in section 2.1, the audit identified a scope limitation that prevented the audit from assessing whether cutblocks 423-08 and 420-01 were in compliance with the Code requirement that cutblocks not exceed 60 hectares. Each of these cutblocks exceeded 60 hectares and the information required to justify the block sizes was destroyed by fire prior to the audit. Consequently, no opinion is provided on the compliance of cutblocks 423-08 and 420-01 with the Code requirement that cutblocks not exceed 60 hectares.

In reference to compliance, the term "in all significant respects" recognizes that there may be minor instances of non-compliance that either may not be detected by the audit, or that are detected but not considered worthy of inclusion in the audit report.

Sections 2 and 3 of this report from the auditor describe the basis of the audit work performed in reaching this opinion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with the Code.



Steven M. Tribe, CA
Auditor of Record
Victoria, British Columbia

January 28, 2004

[i] The International Organization for Standardization (ISO) is a non-governmental worldwide federation of national standards bodies. ISO 14001 is the international standard defining the organizational structure, responsibilities, procedures, processes and resources required in implementing environmental management systems. It does not specify environmental performance criteria, but provides a framework for an organization to set the criteria together with objectives and targets plus auditing and reporting systems. Undertaking independent certification under ISO 14001 is voluntary.

[ii] A forest development plan is an operational plan that provides the public and government agencies with information about the location of proposed roads and cutblocks for harvesting timber over a period of at least five years. The plan must specify measures that will be carried out to protect certain forest resources prescribed by regulation. It must also be consistent with any higher level plans. Site-specific plans are required to be consistent with the forest development plan.

[iii] A silviculture prescription is a site-specific operational plan that describes the forest management objectives for an area to be harvested (a cutblock). The silviculture prescriptions examined in the audit are required to describe the management activities proposed to maintain the inherent productivity of the site, accommodate all resource values including biological diversity, and produce a free-growing stand capable of meeting stated management objectives. Silviculture prescriptions must be consistent with forest development plans that encompass the area to which the prescription applies.

[iv] A site plan is a site-specific plan that is required in place of a silviculture prescription as of December 17, 2002, except where there is already an existing silviculture prescription. The site plan contains many of the same elements as a silviculture prescription and is designed to identify resource values and define what a free-growing stand will be on that site. However, it is not an operational plan under the Code and does not require review or approval by government to be implemented.